

SECTION 33 40 05

REINFORCED CONCRETE HEADWALLS AND ENDWALLS

(Sentences and/or paragraphs that are double underlined indicate revisions that were made from the 2008 specification.)

PART 1 - GENERAL**1.1 DESCRIPTION**

- A. This item shall include reinforced concrete headwalls and endwalls which shall be constructed as indicated on the Plans in true conformity with the lines, grades, dimensions and designs as shown on the Plans and in accordance with this Specification.

1.2 MEASUREMENT AND PAYMENT

- A. Payment for reinforced concrete headwalls or sloped end treatments will not be considered a separate pay item but shall be considered subsidiary to the price of the drainage pipe.

1.3 SUBMITTALS

- A. Concrete Mix Designs
- B. Certification for cement conformance to specification
- C. Test reports for all required concrete tests

PART 2 – PRODUCTS**2.1 MATERIALS**

Concrete shall be reinforced concrete as specified in SECTION 33 40 05 – REINFORCED CONCRETE HEADWALLS.

2.2 TESTING REQUIREMENTS

As specified in SECTION 31 23 33 – EXCAVATING, TRENCHING, AND BACKFILLING and SECTION 03 30 00 - CONCRETE.

PART 3 – EXECUTION**3.1 GENERAL**

- A. The surface of the ground on which the headwalls are to be constructed shall be tamped and compacted to ninety-eight percent (98%) standard proctor density (ASTM D 698) to form the bottom of the headwalls and endwalls. The construction of reinforced concrete headwalls and endwalls shall be in accordance with standard procedure and shall conform to the location, line, grade and dimensions as shown on the Drawings and/or as directed by the Engineer. All excavation, forming and placing of reinforcing steel shall be approved by the Engineer before any concrete is placed.

END OF SECTION